

## CLAIMS

1. A method, comprising:
  - a) providing a charged tRNA molecule and a coumarin marker molecule, wherein said coumarin marker has a sulfonated-NHS leaving group; and
  - b) reacting said charged tRNA with said coumarin marker molecule to create a tRNA/marker conjugate.
2. The method of Claim 1, further comprising:
  - c) introducing said tRNA/marker conjugate into a translation system under conditions such that said marker is incorporated into a nascent protein.
3. The method of Claim 2, further comprising:
  - d) detecting said nascent protein containing said marker.
4. The method of Claim 3, further comprising:
  - e) isolating said detected nascent protein.
5. The tRNA/marker conjugate produced according to the method of Claim 1.
6. A kit, comprising:
  - a) a first containing means containing at least one component of a protein synthesis system;
  - b) a second containing means containing a tRNA/marker conjugate produced according to the method of Claim 1.
7. The kit of Claim 6, wherein said tRNA of said tRNA/marker conjugate is an initiator tRNA.

8. The kit of Claim 6, wherein said tRNA of said tRNA/marker conjugate is a suppressor tRNA.
9. The kit of Claim 6, wherein said component of said protein synthesis system comprises ribosomes.